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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/584,741	09/06/2006	Shigeru Tanaka	TIP-06-1177	5793
35811 7590 07/11/2011 IP GROUP OF DLA PIPER LLP (US) ONE LIBERTY PLACE 1650 MARKET ST, SUITE 4900 PHILADELPHIA, PA 19103			EXAMINER NELSON, MICHAEL B	
			ART UNIT 1798	PAPER NUMBER
			NOTIFICATION DATE 07/11/2011	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

pto.phil@dlapiper.com

Office Action Summary

Application No.

10/584,741

Applicant(s)

TANAKA ET AL.

Examiner

MICHAEL NELSON

Art Unit

1798

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 April 2011.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 8-11, 16-18, 27, 30, 33 and 39 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 8-11, 16-18, 27, 30, 33, 39 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-946)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

1. Applicant's amendments of 04/26/11 have been entered. Claims 8-11, 16-18, 27, 30, 33, 39 are currently under examination on the merits.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(e) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 8-11, 16-18, 27, 30, 33 and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Asakura et al. (JP 03 187742), see English language translation, in view of Sadamitsu et al. (WO 02/066233), see U.S. 2004/0096744 as an English language equivalent.

Regarding claim 8, Asakura et al. discloses a biaxially oriented thermal transfer recording film (Page 8, last full paragraph and page 10 first full paragraph). The polypropylene containing core layer A (claim 1) of the laminate of Asakura et al. is sandwiched by skin layers, B, and can be further laminated on one side to an anchor substrate with an adhesive layer C (page 13, first full paragraph). The surface of the laminate is disclosed as including an image receiving layer which is made up of a coating (Page 28, "Composition of the image-receiving layer"). This coating is substantially identical to the coating disclosed in the instant specification at [0247] and since Asakura et al. discloses that his invention has high glossiness (Page 14, end of first paragraph) and has substantially the same surface roughness (i.e. less than 0.3 at the top of page 6, as compared to the instant 0.01-0.5), one having ordinary skill would expect the outer surface to exhibit the glossiness as instantly recited. The cushion rate of the laminate is disclosed as being greater than 8% (fourth paragraph on page 9).

While Asakura et al. does not explicitly disclose a core layer (i.e. "A" layer) which meets the instant limitations, Asakura teaches that the core layer comprising polypropylene resin has B-crystal activity (crystallization nucleating agent, page 7, 2nd paragraph), and that a large amount of nucleus voids (page 4, last paragraph) is undesirable (page 8). Sadamitsu et al. discloses a biaxially oriented porous (i.e. void containing) film which is improved in strength (i.e. breakage resistance) and thickness uniformity (See Abstract) and which can be used in synthetic paper ([0112]). The core layer of Sadamitsu et al. is disclosed as containing a polypropylene base,

inter alia a polypropylene homopolymer ([0128]), and B-crystallization nucleators which impart B-crystal activity. The Table 1 at page 20 of Sadamitsu et al. shows that for example A the B-crystal ratio of the core layer is 72% and the porosity (i.e. void ratio) is 57%. The voids created in the film of Sadamitsu et al. are a result of the different crystalline states of polypropylene ([0002]) and are therefore non-nucleus voids in that there is no nucleating particle left in the void after it is stretched.

The inventions of both Asakura et al. and Sadamitsu et al. are drawn to the field of porous polypropylene films for use in thermal transfer films (i.e. synthetic paper) and therefore it would have been obvious to one having ordinary skill in the art at the time of the invention to have modified the core layer of Asakura et al. by using the porous layer of Sadamitsu et al. for the purposes of imparting increased breakage resistance and thickness uniformity.

Given that the "B" layer of Asakura et al. (Embodiments 1 and 2 of Table 1 on the last page and "Means of solving the problem" at Page 5) is substantially identical to the B layer composition disclosed at page 98 of the instant specification (i.e. @95% polypropylene and @5% PMP), one having ordinary skill would expect it to exhibit the claimed half crystallization time. The density of the film of Asakura et al. is disclosed as being between 0.75 g/cm³ or less (Page 9, second full paragraph).

Regarding claim 9, given that the "B" layer of Asakura et al. (Embodiments 1 and 2 of Table 1 on the last page and "Means of solving the problem" at Page 5) is substantially identical to the B layer composition disclosed at page 98 of the instant specification, one having ordinary skill would expect it to exhibit the claimed crystallization temperature.

Regarding claim 10, given that the "B" layer of Asakura et al. (Embodiments 1 and 2 of Table 1 on the last page and "Means of solving the problem" at Page 5) is substantially identical to the B layer composition disclosed at page 98 of the instant specification and given the substantially density, one having ordinary skill would expect it to exhibit the claimed void ratio.

Regarding claims 11 the surface roughness is disclosed as between 0.25 and 0.08 micrometers (Page 10, first full paragraph).

Regarding claim 16, the laminate of modified Asakura is disclosed as including a substrate (receiving layer) on the biaxially stretched white polypropylene film (page 13, first full paragraph and Bottom of Page 12 and Abstract of Sadamitsu).

Regarding claims 17 and 18, the laminate is disclosed as being laminated onto a substrate (page 13, first full paragraph) with an adhesive layer, C, which would be the anchor layer and which is comprised of acryl based resins (first full paragraph of page 11).

Regarding claim 27, titanium dioxide is disclosed for use with the B layer in Asakura (Bottom of Page 12).

Regarding claim 30, Asakura discloses achieving optical densities within the claimed range (Table 1, last page).

Regarding claim 33, given that Titanium oxide is disclosed (Bottom of Page 12) and given that the film is disclosed as receiving images, one having ordinary skill would have optimized the whiteness of the film to provide the optimum contrast for any images received thereon.

Regarding claim 39, the laminate of modified Asakura is disclosed as including a substrate (receiving layer) on the biaxially stretched white polypropylene film (page 13, first full paragraph and Bottom of Page 12 and Abstract of Sadamitsu).

Response to Arguments

6. Applicant's arguments of 04/26/11 have been considered but are not persuasive.
7. Applicant first argues that there is no motivation to combine the two references. This is not so. As explained in the rejection, there is a motivation to combine the references to use the core layer of Sadamitsu as the core layer of Asakura because of its high strength properties. Applicant then argues that because the core layer of Asakura and Sadamitsu utilize different materials (PMP and B-crystallization agents) they teach away from each other. This is not so. The use of different materials does not prevent one having ordinary skill from using a core layer with one material, which has a high strength, in place of another core material using a different material. There is nothing in the references to indicate that either reference prohibits the combination as in the instant rejection.
8. Next applicant argues that the combination would prohibit achieving the cushion factors called for in Asakura (greater than 8%). This is not so. Applicant alleges that Asakura, while disclosing greater than 8% actually means between 8% and 15.6% because the highest example in Asakura is 15.6%. However examples do not limit the disclosure of a reference and if Asakura discloses greater than 8% cushion factor then one having ordinary skill would find it obvious to provide greater than 8% cushion factor regardless of what particular cushion factors were used in the examples. There is nothing to show, as applicant alleges, that the values used in the examples indicate Asakura was incapable of achieving cushion factors greater than 15.6%.

Applicant also references a previous declaration in which an example of Sadamitsu was shown to have a cushion factor of 4%. Using similar reasoning as above, this specific example does not bear on the fact that Asakura discloses achieving greater than 8% cushion factors. A single example from Sadamitsu does not limit the teachings of Sadamitsu or the teachings of Asakura which call for cushion factors of 8% or more.

Conclusion

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL NELSON whose telephone number is (571)270-3877. The examiner can normally be reached on Monday through Friday 6AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Angela Ortiz can be reached on (571) 272-1206. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/MN/
06/24/11

/SOPHIE HON/
Primary Examiner, Art Unit 1798